



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,173	03/03/2006	Leonardo Provvedi	103884.56565US	8290
23911 7590 03/19/2009 CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			EXAMINER HERRERA, DIEGO D	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 03/19/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/542,173

**Applicant(s)**

PROVVEDI, LEONARDO

**Examiner**

DIEGO HERRERA

**Art Unit**

2617

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 15-21 is/are rejected.
- 7) ☒ Claim(s) 13-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

Claims 13-14 are objected to under 37 CFR 1.75(c) as being in improper form because a proper multiple dependent claim must only refer multiple claims in the alternative. Claims 13 and 14 improperly refer to each of claims 1 and 12. See MPEP § 608.01(n). Accordingly, the claims 13-14 are not been further treated on the merits.

### ***Response to Amendment***

Claims 15-21 have been added as new claims.

### ***Response to Arguments***

Applicant's arguments filed 12/16/2008 have been fully considered but they are not persuasive. In regards to applicant's arguments, wherein claims 1-10, 12, and 15-21 are concerned, it is argued that the cited references of Murata et al. and Shiu et al. do not disclose channel quality indication, however, the reference of Shiu et al. teaches SINRs or SNIRs which determines the channel quality, see paragraphs: 11, 13-14, and 52-54. It is argued that characterized in that the indication of the existing quality of the channel of variable quality is communicated to the mobile station by in-band signaling, whereby the indication of the existing quality of the channel of variable quality is included in every downlink radio packet, in data locations normally assigned for carrying user information, however, Shiu et al. teaches downlink transmitting channel quality from base station to the mobile device station through the TCFI including that

information of the channel quality by the SNIRs data, see paragraphs: 48-50, and 52-55.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-10, 12, and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable Murata et al. (US 7339998 B2), and in view of Shiu et al. (US 20030036403 A1).

**Regarding claims 1 and 15.** Murata et al. discloses in a mobile communications system comprising a network (col. 9 lines: 64—col. 10 lines: 6, Murata et al. teaches network components such as multiple mobiles and cells stations, hence, a network) and at least one mobile station (col. 9 lines: 64—col. 10 lines: 6, Murata et al. teaches network components such as multiple mobiles and cells stations, hence, a network), a

method for selecting a transport format combination TFC to be used for communication from the mobile station to the network (abstract), over a channel of variable quality (fig.

4, 10, B-12, col. 15 lines: 3-16, Murata et al. teaches classification of TFC in order of classes based on quality and evaluation), the method comprising the steps of:

a) defining a set of possible transport format combinations (fig. 4, 10, B-12, col. 15 lines: 3-16, Murata et al. teaches classification of TFC in order of classes based on quality and evaluation);

b) calculating a channel quality requirement for the effective use of each transport format combination (fig. 4, 10, B-12, col. 15 lines: 3-16, Murata et al. teaches classification of TFC in order of classes based on quality and evaluation);

c) indicating the transport format combinations and the channel quality requirements to the mobile station (col. 19 lines: 34-54, Murata et al. teaches base station sending TFC information to mobile device after monitoring conditions of traffic);

d) calculating an existing quality of the channel of variable quality (fig. 10-12, col. 8 lines: 28-34, col. 19 lines: 22-60, col. 20 lines: 46—col. 21 lines: 52, Murata et al. teaches method of classifying ranking based on quality); and

e) indicating the existing quality of the channel of variable quality to the mobile station (fig. 10-12, col. 8 lines: 28-34, col. 19 lines: 22-60, col. 20 lines: 46—col. 21 lines: 52, Murata et al. teaches method of classifying ranking based on quality); and,

in the mobile station (fig. 10-12, col. 8 lines: 28-34, col. 19 lines: 22-60, col. 20 lines: 46—col. 21 lines: 52, Murata et al. teaches method of classifying ranking based on quality, suspecting that the calculation are also derived from system, it is not clear as to

what is meant "in the mobile station");

f) storing the transport format combinations and relative channel quality requirements (col. 20 lines: 39-45, Murata et al. teaches storing information parameters in a non-volatile memory in mobile station);

However, Murata et al. does not disclose specifically, g) receiving the indication of existing channel quality; nonetheless, Shiu et al. teaches sending information to the mobile device about indication of existing channel quality (¶: 49-52, Shiu et al. teaches parameters send for mobile device to adjust for transmission of data). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to specifically include receiving the indication of existing channel quality, as taught by Shiu et al. for the purpose of adjusting power levels and user-specific data in a time-division multiplexed manner along with control data (¶:49).

h) selecting one of the transport format combinations having a channel quality requirement no greater than the existing channel quality (fig. 4, 10, B-12, col. 15 lines: 3-16, Murata et al. teaches classification of TFC in order of highest to lowest quality), and

i) informing the network of the selected transport combination (col. 6 lines: 40-49, Murata et al. teaches communication system W-CDMA information relating to TFC), however, Murata et al. doesn't disclose specifically characterized in that the indication of the existing quality of the channel of variable quality is communicated to the mobile station by in-band signaling, whereby the indication of the existing quality of the channel of variable quality is included in every downlink radio packet, in data locations normally

assigned for carrying user information, nevertheless, Shiu et al. teaches information relating variable quality is communicated to the mobile station by in-band signaling, in other words, downlink radio packets through base station(s) (abstract, title, ¶¶:48-50, 52-55, Shiu et al. teaches downlink transmitting channel quality from base station to the mobile device station). One skilled in the art would be motivated to have information relating to quality of service to mobile station by means of the system using base station through downlink to be stored in mobile device to adjust internal settings to broadcasted parameters by base station to be able to efficiently communicate and abate SNR.

**Consider claim 2.** A method according to claim 1 wherein the step h of selecting one of the transport format combinations is performed with regard to the type of data to be transmitted by the mobile station (¶¶: 49-52, Shiu et al. teaches parameters send for mobile device to adjust for transmission of data).

**Consider claim 3.** A method according to claim 1, wherein the transport format combinations enable transmission of data blocks containing data from different Temporary Block Flows in each block (¶¶: 33, Shiu et al. teaches transport format combinations enable transmission of data blocks in this case following the standards listed that are known in the art and are incorporated).

**Consider claim 4.** A method according to claim 1, wherein calculation of the existing quality of the channel of variable quality is performed periodically during communication (col. 10 lines: 6-19, Murata et al. teaches monitoring communication traffic).

**Consider claim 5.** A method according to claim 1, wherein the relative channel quality is calculated as the minimum channel quality required such that data sent on the

channel is received with an error ratio below a defined threshold (col. 20 lines: 15-19, col. 22 lines: 39-45, Murata et al. teaches monitoring channel if it falls below class level or goes beyond designated class level it will not be allowed).

**Consider claim 6.** A method according to claim 1, wherein the step c of indicating transport format combinations and channel quality requirements to the mobile station includes the steps of:

(c1) ranking the transport format combinations according to the associated channel quality requirement (fig. 12, col. 21 lines: 65—col. 22 lines: 8, Murata et al. teaches simplified calculation of rank and it is an absolute value); and

(c2) indicating the rank of each transport format combination to the mobile station, along with the transport format combinations themselves, to the mobile station (col. 19 lines: 54-60, Murata et al. teaches transmitting information to mobile station traffic information and classification).

**Consider claim 7.** A method according to claim 6, wherein the step c2 of indicating the rank of each transport format combination comprises indicating the transport format combinations themselves in order of increasing, or decreasing, rank (fig. 4, 10, B-12, col. 15 lines: 3-16, Murata et al. teaches classification of TFC in order of classes based on quality and evaluation).

**Consider claim 8.** A method according to claim 6, wherein the step of indicating the existing quality of the channel of variable quality comprises indicating the rank of the transport format combination having the highest channel quality requirement, which could effectively be employed on the channel in its existing quality (fig. 10-12, col. 8



lines: 28-34, col. 19 lines: 22-60, col. 20 lines: 46—col. 21 lines: 52, Murata et al.

teaches method of classifying ranking based on quality).

**Consider claim 9.** A method according to claim 8, wherein the rank is indicated as an absolute value (fig. 12, col. 21 lines: 65—col. 22 lines: 8, Murata et al. teaches simplified calculation of rank and it is an absolute value).

**Consider claim 10.** A method according to claim 8 wherein the rank is indicated as a relative value, being an offset relative to a previous value of the rank (col. 10, lines: 41-45, col. 12 lines: 39-56, abstract, Murata et al. teaches measurements are relative and ranked accordingly).

**Consider claim 12.** A communications system comprising a network and a mobile station, respectively comprising means for carrying out the steps of, and arranged to perform, the method of claim 1 (col. 6 lines: 40-49, Murata et al. teaches communication system W-CDMA).

**Consider claim 16.** The method of claim 15, wherein the indication of existing channel quality is included in the packet following the coded transport format combination identifier (TFCI) (¶: 51, Shiu et al. teaches including data with TFCI).

**Consider claim 17.** The method of claim 15, wherein the indication of existing channel quality of the channel of variable quality is received by the mobile station in every data packet (¶: 51-54, Shiu et al. teaches downlink shared channel and TFCI field with data to mobile device).

**Consider claim 18.** The method of claim 15, wherein the selection of one of the transport format combinations is performed with regard to the type of data to be

transmitted by the mobile station (¶: 49-52, Shiu et al. teaches parameters send for mobile device to adjust for transmission of data).

**Consider claim 19.** The method of claim 15, wherein the transport format combinations allow transmission of data blocks containing data from different Temporary Block Flows in each block (¶: 33, Shiu et al. teaches transport format combinations enable transmission of data blocks in this case following the standards listed that are known in the art and are incorporated).

**Consider claim 20.** The method of claim 15, wherein the relative channel quality is calculated as the minimum channel quality required such that data sent on the channel is received with an error ratio below a defined threshold (col. 20 lines: 15-19, col. 22 lines: 39-45, Murata et al. teaches monitoring channel if it falls below class level or goes beyond designated class level it will not be allowed).

**Consider claim 21.** The method according to claim 15, wherein the mobile station receives from the base station an indication of a rank of each transport format combination according to the associated channel quality requirement (col. 19 lines: 54-60, Murata et al. teaches transmitting information to mobile station traffic information and classification).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEGO HERRERA whose telephone number is (571)272-0907. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diego Herrera/  
Examiner, Art Unit 2617

/Lester Kincaid/  
Supervisory Patent Examiner, Art Unit 2617